

Claims

- [c1] 1. A photomask with an internal assistant pattern, comprising:
 - at least a pattern comprising a plurality of parallel lines;
 - and
 - an internal assistant pattern comprising a shaped structure formed in said pattern.
- [c2] 2. The photomask of claim 1, wherein the shape of the shaped structure of the internal assistant pattern is one selected from a group consisting, a square, a rectangle, and a circle.
- [c3] 3. A photomask with an internal assistant pattern, comprising:
 - an opaque panel comprising two light exit apertures, for exposing the photomask, wherein the two light exit apertures are positioned along a common line;
 - a first pattern comprising a plurality of parallel lines along a first direction;
 - a second pattern comprising a plurality of parallel lines along a second direction, wherein the second direction is different from the first direction, wherein at least parallel lines of said first or second pattern is positioned parallel

to said common line; and
an internal assistant pattern comprising a shaped structure formed in one of said first or second patterns.

- [c4] 4. The photomask of claim 3, wherein the internal assistant pattern is formed in the first pattern when the parallel lines of the second pattern are positioned along a vertical direction with respect to the common line of two light exit apertures.
- [c5] 5. The photomask of claim 3, wherein the internal assistant pattern is formed in the second pattern when the parallel lines of the first pattern are positioned along a vertical direction with respect to the common line of two light exit apertures.
- [c6] 6. The photomask of claim 3, wherein the shape of the shaped structure of the internal assistant pattern is one selected from a group consisting, a square, a rectangle, and a circle.
- [c7] 7. A photomask with an internal assistant pattern, comprising:
 - an opaque panel comprising two light exit apertures, for exposing the photomask, wherein the two light exit apertures are positioned along a common line;
 - a horizontal pattern comprising a plurality of parallel

lines;

a vertical pattern comprising a plurality of parallel lines;

and

an internal assistant pattern comprising a shaped structure in at least one of said horizontal or vertical patterns.

- [c8] 8. The photomask of claim 7, wherein the internal assistant pattern is formed in the horizontal pattern when the parallel lines of the vertical pattern are positioned along a vertical direction with respect to the common line of two light exit apertures.
- [c9] 9. The photomask of claim 7, wherein the internal assistant pattern is formed in the vertical pattern when the parallel lines of the horizontal pattern are positioned along a vertical direction with respect to the common line of two light exit apertures.
- [c10] 10. The photomask of claim 7, wherein the shape of the shaped structure of the internal assistant pattern is one selected from a group consisting, a square, a rectangle, and a circle.